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## LECTURES ON THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART.

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### LECTURE XVI.

#### DISEASES OF THE HEART.

THE signs of the diseases of the heart are more easy, but less precise than those of the lungs. The structure of the heart is extremely simple, and its functions are very limited; while each of its surfaces is covered by a serous membrane which is the subject of much fewer lesions than the complex tissue of the lungs. The little complexity of the structure of the heart has its disadvantages for diagnosis; there is no expectoration from a mucous surface, and not the numerous combinations of rhonchi met with in the diseases of the lungs, which, although sometimes difficult to recognise, are generally sufficient to point out, with great accuracy, the exact nature and seat of the lesion. So far as the signs of diseases of the heart go, they are, therefore, very easy of recognition; but, beyond a certain point, they do not indicate the nature of the lesion with much precision, and the diagnosis is then approximative only. The gradual researches of late pathologists have, however, removed much of this difficulty, and although we have not yet reached precision, it is more nearly attained than it formerly was; and many disorders, such as inflammation of the lining membrane, and some valvular diseases, are much more easily recognised than they formerly were. This accuracy in diagnosis will probably extend a little further, although we doubt whether it will attain absolute perfection, so as to enable us to recognise the slighter organic lesions; this, however, is not, in most cases, of great practical importance.

The discovery of auscultation has probably done still more for the study of the diseases of the heart than of the lungs; that is, they were almost totally unknown, except the description of some of the pathological lesions. The symptoms of the different affections are so nearly allied, and so often obscured by those

of various disorders of the lungs that it was extremely difficult to distinguish them one from the other, or even in many cases to decide that any affection of the heart existed. The united influence of accurate observation aided by physical exploration, and of pathological anatomy, has removed these difficulties as much as the nature of the subject will admit; and, as a necessary result, the progress of investigation has been directed to the causes which precede cardiac affections, and to the numerous secondary disorders which result from them. Hence, the disease of the heart is taken as a starting point; and the secondary affections are either lost sight of, or are properly regarded as mere effects, not as separate disorders. Thus, the congestions of the lungs, and the serous effusions into the chest, are, comparatively speaking, rarely mentioned; and hydrothorax, and asthma—when it is a mere consequence of heart disease—now attract little attention.

The investigation as to the causes of heart disease has produced some unlooked for results, and has shown very conclusively that in a large majority of cases, especially in young persons, they result directly from inflammation; and that even in the aged, inflammation is a secondary cause which adds very much to the slow alterations of nutrition, which arise merely from advance in years. As the causes are now better known, the treatment of these affections has become more definite,—that is, the early treatment employed with perseverance during the early or inflammatory period, before those fixed organic lesions are formed which are beyond the reach of art.

After this period our resources are more limited, and are strictly palliative, so far as the cardiac lesion itself is concerned, and our object is then rather to prevent the increase of the lesion and to relieve its effects upon other organs, than to remove it. We regard organic alterations when fixed, and, as it were, established, very nearly in the same light as original vices of conformation, from which they differ very little. The curative treatment is, then applicable only to the reactive inflammatory



stage, or to the early periods of the disease, in case it is not inflammatory at its commencement. Treatment may then be active and positive in its results.

Although in those stages in which the organic lesion is fixed and has become a mere peculiarity of nutrition, we cannot directly remove it, the mere prevention of increase often allows the natural powers of the system to recover the balance to which they are perpetually tending. In this way a considerable enlargement of the heart will sometimes gradually diminish, until the organ is gradually restored to its natural dimensions. These cures, however, must be limited to those cases in which the diseased part is enlarged, and the new superfluous portion of structure may then be absorbed; but when there is a destruction of an important part, or an entire perversion of its tissue, a cure can in no case be expected, and the treatment is then absolutely palliative.

*Symptoms of Diseases of the Heart.*—

These are to some extent common to all those affections, whether functional or organic, but they vary extremely in intensity, and are by no means directly proportioned to the severity or the danger of the affection. The principal symptoms which occur in most diseases of the heart are irregular and disordered action of the organ, sometimes amounting to that degree of violence which is commonly called palpitation; painful or disagreeable sensations in the region of the heart; and impediments to the circulation, causing congestions of blood, and effusions of serum. Palpitation of the heart is more constant and troublesome to the patient in simple nervous disorder than in organic disease; in the latter case it is usually provoked only by violent exercise, or by some sudden effort. In the acute inflammatory cases the symptom is often totally absent. Painful sensations in the chest are very variable, one of the most distressing is an acute pain felt near the left nipple, or at the extremity of the sternum; this pain, it is true, does not always coincide with any positive symptoms of cardiac disease, but, in many cases, is plainly connected with a mere nervous disorder, or with dilatation, or with both these conditions combined. The pain is not accompanied with dyspnoea, as in angina pectoris, but it will

sometimes extend across the chest or pass down the left arm. Both palpitations and pain are as often connected with nervous disease as with organic lesion; but this is not the case with the impediments to the circulation and their effects; these are almost always dependant upon organic disease, or, at least, much more frequently, and to a much greater degree than upon organic lesion. They occur in muscular derangements of structure, as hypertrophy and dilatation, but are much more decided if the valves are at the same time diseased. As a general rule they are more severe in proportion as the valves are narrowed, so as to prevent the free passage of the blood, forcing it, as it were, backwards, and thus producing congestions and anasarcaous effusion, or hydrothorax. When the symptoms of heart disease have for a long time preceded the dropsy, they may be regarded as almost pathognomonic of a grave lesion, which is in these cases most frequently hypertrophy conjoined with valvular disease.

Irregularity and intermittence of the pulse attracted more notice before the discovery of auscultation than it does at present; for although this symptom is not without its value, and in reality often attends various heart diseases, it is necessarily uncertain, and sometimes occurs during the convalescence of acute diseases in which the heart is in no wise involved, while it is a congenital peculiarity in some individuals, lasting through a long life, but apt to terminate in decided heart disease. It is clearly not owing directly to the obstruction, but to the enfeebled action of the heart, which is no longer proportioned to the column of blood which it has to propel, and works in a hesitating irregular manner. Now this may arise from causes totally independent of actual disease of the heart, but it is more apt to occur in connection with heart disease than independently of it; and in other cases where no actual disorder is developed, the chances of future affections of the heart are certainly increased.

*Causes of Heart disease.*—The inflammations of the membranes of the heart not only constitute a frequent form of disorder, but give rise to a large proportion of organic lesions; this is more especially the case with the inflammation of the internal membrane, for pericarditis has comparatively little influence in producing permanent derangement of structure. The causes



of these inflammations resolve themselves in those which ordinarily produce the phlegmasia, and into the peculiar connection known to exist between them and rheumatic disease. Besides inflammation, there are, however, other causes of heart disease; the muscular tissue of the organ may increase in thickness from the constant activity into which it is thrown, and organic disease is in this way developed as a consequence of long continued nervous excitement. Enlargement of the heart may also arise from a sudden injury inflicted upon it as a violent strain or effort, or some other sudden propulsion of the blood towards the organ which is strained beyond the power of complete recovery. The gradual advance of age has also a tendency to produce a gradual enlargement of the heart and the formation of ossific deposits in the valves or its internal membranes; and in these cases there is at least no evidence of direct inflammatory action. The causes of functional diseases of the heart are, of course, as various as of all nervous disorders, and are sometimes the most opposite in their character; in general, the nervous disorders are apt to arise in cases of anemia, or of deficient muscular power, or are directly dependent upon spinal irritation or chronic gastric disorder.

*Terminations of Heart disease.*—The acute inflammatory affections of the heart may terminate in recovery, and the patient may be restored to entire health; but in many cases the disease gets well so far as the acute affection is concerned, but the organic lesion continues. Chronic organic affections, as a general rule, do not terminate in recovery; they may end in death, or they may be prolonged without causing more than mere discomfort to the patient, or shortening the natural duration of his life. The former case arises from the severity of the lesion, which is often sufficient to seriously impede the circulation of the blood; or from the enfeebled state of the patient, and the thinness of the blood, which favours the dropsical effusions of the latter stages of these diseases. These aggravated cases vary in duration, but they generally prove fatal of themselves, or they merely increase the severity and the danger of some intercurrent disease, so that death results from the combined influence of the chronic and of the acute disease. The structure

and peculiar functions of the heart increase the mortality from the chronic diseases; they are rarely single, or, at least, do not long remain so, but tend not only to increase from the continued play and action of the heart, but one will produce another, hypertrophy will give rise to valvular disease and inflammation of the endocardium, while the converse is also true, and to a much greater degree. Functional diseases of the heart have in themselves little power in shortening life, but as they are at times causes of the organic affections, the indirect influence is at times very pernicious.

*Influence of age and sex.*—The age has a strong influence in favouring the development of heart disease, while the masculine sex is also not without its influence. Men are much more exposed to the causes of inflammation than women, and therefore suffer more from all the disorders which arise from it; nutrition is also more active in them, favouring, of course, the development of hypertrophy, and of other affections in which nutrition is in excess. As regards the influence of age, it may be readily analysed; cardiac diseases must be proportionably more numerous as we advance in life, 1st, because they are of slow growth, and form, as it were, insensibly, so that they only reach their full development after many years; 2d, because the lesions of nutrition are in themselves more frequent in the old than in the young, as is proved by the invariable and natural increase of the heart as we advance in years, even if no absolute disease be developed. Males are, therefore, more subject to cardiac diseases than females, partly from the greater exposure to the causes of inflammation, and partly from the violent efforts to which the heart is subjected in many of the laborious occupations of the male sex. This, however, holds good only with the organic diseases of the heart, for the nervous functional disorders are vastly more frequent in women, especially in those in whom the nervous susceptible character is most developed.

*General Diagnosis and Prognosis.*—Although accurate or special distinctions as to the precise seat of heart disease and its probable termination, can only be made by studying carefully the physical conditions of this organ, and the precise part affected, there are certain general characters of heart disease which are well



known in their applications to the general study of these affections.

Besides the special symptoms of organic diseases of the heart, they are generally known by some decided signs which indicate that some serious mischief has attacked the organs. These are orthopnœa, a feeling of weight and of stricture in the præcordia, fulness of the cervical veins, and great increase of dyspnœa in ascending a height or a steep flight of stairs. Blueness or lividity of the lips is also an excellent sign. A thrilling pulse, and œdematous effusions are also often characteristic. The irregularity of the pulse and the violence of the palpitations are common to both nervous and organic diseases. Pain confined to a limited spot near the apex of the heart is much more common in nervous affections; the same is true of a sensation of fluttering at the heart, of shortness of breath, proportionate merely to the palpitation, and differing from the violent dyspnœa of organic disease. The probability of nervous disorder is rendered much greater if the patient present other signs of a nervous temperament, especially if called into action by the usual exciting causes. The mode of origin of the disease is also important for diagnosis; if at first inflammatory, it is probably organic; or if the patient be stout and muscular, and of a family in which diseases of the heart are hereditary, or the gouty and rheumatic diathesis is very strongly developed. On the other hand, both original constitution and the previous existence of a disease capable of disordering the innervation, render the existence of nervous disease probable. An affection of another organ, especially of the lungs, may act in the same way, and give rise to severe disease, which at times may appear to be organic, but will be quickly dissipated if the original disease be removed: this is very frequently the case with affections of the lungs, especially if the left lung be much indurated, and thus impedes the action of the heart, and conduct the sounds and impulsion both to the ear of an observer and throughout the chest.

The general prognosis of heart disease is commonly understood to be highly unfavourable; hence, in ordinary language, a person who is labouring under an affection of the heart is supposed to be incurably diseased. This is no doubt true, as regards the extreme disorganization of the valves, and of the internal mem-

brane of the heart and aorta, as well as very decided hypertrophy and dilatation; but it is not true of acute inflammatory affections of the heart, or of the moderate degrees of hypertrophy, and still less of the sympathetic nervous disorders which so frequently require medical aid, and often excite the greatest apprehension. Even in those forms of disease in which a strict cure is not expected, the symptoms may, after a time, cease to increase, and even positively decline, without apparently shortening life. Hence the prognosis really depends upon a special diagnosis, and is, in fact, included in it; and if the nature of the disease of the heart is once ascertained, and its rate of increase or diminution settled, the prognosis may be defined—provided no circumstances of a disturbing kind should arise.

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## ORIGINAL COMMUNICATION.

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### NOTES ON MYOTOMY AND TENOTOMY.

BY REYNELL COATES, M. D.

To the Editors of the Medical Examiner.

GENTLEMEN,—In continuation of the subject of my last communication, let me ask of the friends of tenotomy in almost all cases of club-foot, what are the forces to be overcome in order to bring the member into a natural, or even into a useful position?

As there are many kinds of this deformity, and differences of degree in each, which are regarded as important by authorities, while, in fact, the principles on which the pathology and therapeutic treatment should be regulated are nearly identical in all the forms, it is best to select one only as the type of the affection, making incidental remarks upon the others as occasion may require. I have chosen varus in its most perfect state as the basis of the following remarks, both as the most common variety, and according to many, the most difficult of treatment by mechanical measures.

What, then, are the difficulties of greatest importance here? The most obvious, at a first glance, is the shortening of the extensors, and the adductors of the foot, which draw the heel upward until its longitudinal axis is nearly, or exactly parallel with that of the tibia, while, at the same time, they tilt the os calcis inward, until the inner side comes more or less nearly into proximity with the internal condyle, and the sole of the foot presents towards the opposite leg. Were this the only change effected by the morbid cause, we should have a kind of pes equinus, with the whole foot rotated inward until the upper articular surface of the os calcis would nearly approach the inner face of the astragalus, which very rarely changes its relative position, laterally, in varus. The dif-



ficulty could then be overcome with great facility, by simply dividing the tendons of the flexors and adductors, for the *only* cause of the deformity would be the action of these muscles. But this is, unfortunately, *not the only change*.

Experience proves that there is scarcely any alteration of the relative position of the three cuneiform tarsal bones, together with the cuboid and the bones of the metatarsus; or, in other words, there is little change in the form of the foot, anterior to the articulation of the cuboid with the os calcis and that of the cuneiform bones with the scaphoid bone. But, the cuboid is compelled to follow the motion of the os calcis, carrying with it the cuneiform bones, and also, the whole anterior portion of the foot, stretching the exterior or superior cubo-calcanean ligamentous fibres, and causing their permanent elongation. Meanwhile, the scaphoid bone necessarily partakes in the motions of the cuboid and cuneiform bones. It rotates upon its proper axis until its inner tuberosity presents upwards, and its outer surface downwards, perpendicularly, while the cuboid bone lies directly *underneath it*, if we speak of the foot in its natural position. Regarding the extension and tilting of the os calcis as the first of the elementary changes of position in varus, the rotation of the scaphoid and cuboid bones might be regarded as the second. But there is still another range of changes, even more important than these.

Every surgeon who is a mechanist, (as all ought to be so) well knows that the greater the adduction of the foot, when carried beyond its proper limits, while the astragalus remains stationary, the greater is the mechanical disadvantage under which the adducting muscles act—while, on the other hand, the more the plantar surface is turned towards the opposite limb, the more complete is the power of the adducting muscles and the long flexor of the toes to double the foot upon itself, along the middle joint of the tarsus already described.

From the moment that the os calcis begins to be rotated inwards, upon its axis, beyond the proper point, all these muscles collectively commence retracting by their tonicity, thus carrying the flexion of the anterior portion of the foot upon the os calcis and the astragalus to an unusual extent. The scaphoid sinks downward upon the head of the astragalus, leaving it painfully prominent upon the instep, while, in its completely adducted position, the flexing force being changed from the proper direction, slides it round upon the inner side of this bone. The os cuboides, also,—and for the same reason,—takes up a new position on the inner side of the os calcis, and the plantar surface of the fore part of the foot, instead of looking inward towards the opposite limb, as the under surface of the os calcis does, at least partially, looks directly backwards, and the toes extend directly towards the opposite ankle. It is this same excessive flexion in the

new position of the parts, rather than a continued adduction, properly so called, that converts, what would have been a pes equinus with luxation of the calcis on the astragalus, into an extreme case of varus, with the metatarsal bone of the little toe resting on the soil.

To give a rude idea of the relative position of the bones in extreme varus to those who have not completely fixed in their minds the connections of all the tarsal and metatarsal bones, let us suppose the anterior portion of the foot to have been amputated between the os calcis and the astragalus, on the one hand, and the cuboides and scaphoides on the other. Then cutting the firm astragalo-calcanean interosseous ligament, subluxate the os calcis inward. Then take the amputated portion of the foot: turn it with the little toe downwards, and the plantar surface backwards, and place it in contact with the stump, so that the scaphoid bone should rest on the inside of the astragalus, and the cuboid on the inner and lower face of the anterior portion of the os calcis.

Rude as this sketch is, it will be found useful as a reference when I come to speak of the errors of indication in the construction of apparatus.

While in this condition, it is evident that the extremities of the metatarsal bones, next to their tarsal articulations, are brought much nearer than they should be to the heel, and this proximity is often still further increased on the inner side of the foot by a morbid flexion of the three cuneiform bones upon the os scaphoides. The immediate effect of this is a positive shortening of the distance between the origin and insertion, not only of the flexors and adductors of the whole foot, but of the short muscles of the toes also, together with the powerful fascia plantaris. And all these parts must necessarily undergo the several changes of function and structure observable in similar tissues under similar circumstances, after common luxations; and the laws that govern such changes are so well known in the present state of physiological knowledge, that they may be judged of *a priori*, without even having resort to observation: yet we shall find hereafter, that they have been viewed in a very one-sided manner by the exclusive advocates of the knife. What most interests us now is, the fact that the fascia plantaris,—in common with the muscles, after they have accommodated themselves to their new position as far as their tonic contractile power permits,—undergo an alteration in their very nutrition. They become permanently shortened, *and incapable of immediate extension*, at the same time that they are rendered weak for want of functional exercise.

Here, then, we have forces opposing the restitution of the tarsal bones to their proper relative position, which could not possibly be overcome solely by cutting the tendons of the tibial muscles, the triple flexor of the foot, and the long flexor of the toes. Suppose that



these few sections have been made, and,—waving all new connexions between the parts, and the alterations of the form of the bones themselves,—what would be the position of the foot if the surgeon should attempt to restore it by the hand?

All resistance to the flexion of the os calcis and its rotation outwards being removed by the knife, the posterior part of the sole of the foot would be readily directed downwards, and the axis of the os calcis would be brought to a right angle with the leg. The proper relations between the articular surfaces of this bone and the astragalus being re-established, the cuboid bone would also return nearly to its place; but both this and the scaphoid would be flexed on the calcis and astragalus as far as the greatly relaxed ligaments of the instep would permit. The toes would be directed almost perpendicularly downward. The doubling of the middle of the foot would remain nearly unchanged. The exaggeration of the arch of the instep would be scarcely diminished, and any attempt to extend the anterior portion of the foot would be resisted by the habitually and permanently contracted ligaments of the under surface of that arch, by all the muscular fibres of the sole, and by the shortened fascia plantaris. Such are not *precisely* the appearances presented after the usual operation of tenotomy in valgus, but a considerable degree of this deformity is invariably present, increased and much modified by another that will be presently explained.

Now, the stretching of these contracted ligaments and muscular fibres requires either great force or a long time. It requires the very careful management of machinery; and a little want of mechanical tact may render that machinery quite as intolerable to the patient as any apparatus for the simple mechanical treatment, without tenotomy, is described to be by the enemies of that method. During the period of time in which the tenotomists are in the habit of employing mechanical extension, the new bond of union between the extremities of the tendons at the place of division continues to yield to extension. How long it may continue subject to such extension, may be made the subject of another note. This very extensibility of the newly deposited matter causes the mechanical force to act at a disadvantage in removing the undue flexion of the anterior part of the foot, and this disadvantage is exactly proportionate to the facility of extension. Let me explain. The fascia plantaris, and the muscles and ligaments of the sole of the foot are mainly connected at one extremity, with the os calcis.—When force is exerted after the division of the tendo Achilles, almost immediately after the operation, the os calcis occasionally flexes to a certain distance, (sometimes to its full extent,) very readily. The heel is then brought down with great facility; but, for this very reason, the flexion of the anterior upon the posterior portion of the foot, is scarcely affected at all;

for the heel follows the traction of the shortened muscles and ligaments, leaving the exaggeration of the arch of the instep unaltered. If, on the contrary, the extension is delayed until the tendinous union remains firm, the force acts in extending the forepart of the foot, as well as in stretching the tendon; but its efficiency in effecting the former purpose is diminished by its expenditure, in part, upon the latter; and in order to accomplish the purpose, the operation of the force must be continued for a much longer time, and must be changed in its direction. As a matter of fact, the weight of *really well-conducted and dependable observations*, goes to show that this kind of deformity never has been entirely removed: not, as I believe, because it is positively incurable, but because the treatment is not wisely directed towards this end. In Delpech's case, twenty years of exercise had not wholly removed it.

But, say the tenotomists, this difficulty may be removed by dividing the fascia plantaris. This would alleviate, though it would not wholly remove the difficulty. In fact, it has not proved really and fully successful in practice, if we exclude, as every surgeon will, the reported cases in which the surgeon sweepingly asserts, that, in ten days, or three months, or six months, the patient walked as well as any body; *perhaps* adding, *merely incidentally*, in the next paragraph, that he continued to use Scarpa's, or some other peculiar shoe, *merely as a matter of precaution*. Such cases are utterly worthless, and ought to be rejected at once in all calculations of results.

The division of the fascia plantaris, were it not for certain after consequences that may possibly affect the question, would be advisable, on the plea of the difficulty of modifying dense ligaments by pressure or extension, were the causes of resistance to the return of the bones into their proper position entirely, or even mainly confined to those already mentioned: but this is far from being the case. The bones cannot assume the relative position described as characterizing complete varus, without extensive modifications of their form and their articulations.

The os calcis, in gliding towards the inner face of the astragalus, remodels the edge, and even the body of that bone, and its own inner edge undergoes reciprocal changes. The projecting process of the astragalus hanging downwards from the inner side of its posterior articulating surface is usually absorbed, and the corresponding edge of the anterior articulating surface is rounded off, while, in old cases, the body of the bone is reduced to an irregular wedge, with its edge directed inwards, and so thinned as to permit the angular upward projection of the inner edge of the os calcis to form strong ligamentous connections with the tibia; and, sometimes, when the internal condyle is not too far destroyed by absorption, it actually forms a new and complete capsular joint with that process.



Again; the tuberosity of the scaphoid bone is generally connected by new ligaments, and sometimes by a regular articulation with the malleolus. This bone is occasionally so thinned down at its lower and inner edges, that the length of that side of the foot is much diminished—a change that is rendered more remarkable by the diminution of nutrition in the whole leg and foot, but more especially observable on the inner side. In addition to all this, the astragalus is drawn into forced extension by the motion of the os calcis, and thus the whole foot is subluxated forwards. The posterior edge of the tibial trochlear cavity comes into contact with the os calcis, and new ligaments, and sometimes a new articulation is there formed between them.

So much for the changes in the bones, and the formation of new bonds of union between them. But what becomes of the old articulations in the meanwhile? The front and outside of the head of the astragalus has lost its articular cartilage. The capsular ligament has travelled round towards the inner and under surface of the body and head of the bone. The anterior portion of the pulley of the ankle has also lost its cartilage, and the capsule has retreated to the middle of that surface, while the distance between the two malleoli is increased by absorption in front, and diminished by contraction in rear, until there is not space enough to receive the pulley, even were all other obstacles removed.

Now, varus of the most perfect form and of many years standing is cured, say the tenotomists, in from ten days to six months by mechanical treatment after division of the tendons, and, perhaps, the fascia plantaris! and the advocates of the purely mechanical treatment profess to do nearly or quite as much without resort to operation! Let me attack both parties alike. These gentlemen profess, in old and severe cases—What is it they profess? Thus much at least: They have caused the permanent elongation of a dozen new ligaments. They have restored the cartilages and capsular ligaments of several joints to their original position. They have destroyed by pressure or extension, three or four entire and well formed new articulations: and they have reconstructed the absorbed edges of the astragalus and os calcis, restoring the wedge-shaped body of the former to its original oblong form, all in from ten days to six months time! The purely mechanical therapeutists have done more! They have also elongated the muscles of the calf, the tibia and the sole of the foot, all completely adapted to their new position and modified in length and structure, sometimes so as to present more the appearance of common cellular tissue with its cells containing grains of a yellow fatty looking matter, (the inevitable result of long-continued muscular inactivity,) reconverting these organs to the condition of true and

active muscles—all in from ten days to six months!

That this wonderful change may be accomplished—that it may sometimes be accomplished much more certainly without tenotomy than by its aid, the well known history of true luxations and the effects of exercise and rest most fully prove. But, *in from ten days to six months!* Truly this is asking credulity *beyond the faith of sailors!*

But “facts are facts,” say the race of judges who smile at theory because they are too blind to see that theory (I do not mean *hypothesis*) is built exclusively on facts, and must be just as true as the facts on which it is founded. To this empirical school of observers I must say, that the results set forth in the reports of some of the boldest operators of either class, *are not strictly facts*, in the philosophical sense of the word. *Men who are too cautious to draw upon their imagination for their facts, may still be biased by their wishes!* The cures, in the bad cases, are not cures at the time of the reports. The very fact that they are so considered, probably prevents them from becoming so in a reasonable time! I have examined several cases of reported cures, where, indeed, the deformity has been astonishingly lessened, and the foot has been rendered useful to a considerable extent;—but in every severe case, whether treated with or without tenotomy, the exaggeration of the arch of the instep from contraction of the sole continued—the inner edge of the foot preserved its arcuated form from the diminution of the tarsal bones—the foot could not be flexed materially beyond the right angle—its subluxation forward was but partially removed, the pulley of the astragalus being decidedly prominent on the instep—and, although when the muscles were perfectly at rest the foot assumed the natural, partially adducted attitude of sleep, the moment the muscles were called into play, the tendency to turn preternaturally inwards was obviously betrayed—not so much, as it would seem, from excessive action of the adductors, as from the want of proper osseous support from the astragalus and os calcis.

But I am exceeding my proper limits, and must close for the present.

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## THE MEDICAL EXAMINER.

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PHILADELPHIA, SEPT. 25, 1841.

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BOSTON JOURNAL OF AUGUST 18.

Our attention has been called within a few days past to a critique on the case of President Harrison, and to an editorial article accompanying it, contained in the Boston Journal for the 18th of August. As to the anonymous critique, we entertain but one opinion of such



attacks; it is morally and professionally wrong to censure the treatment pursued by a professional brother, except where an obvious good will result, and then the criticism should be conducted in a scientific way, and not to gratify envious or malicious feelings. Comments upon the case of President Harrison can be of little service, even if they were written in a tone indicative of a correct and honourable feeling, because the disease was evidently one of those obscure and complicated varieties in which the rules of treatment cannot be laid down with absolute certainty, and the management must be left in a great degree to the tact and skill of the attendant. The rules for treatment in such cases are more negative than positive; and of these negative rules there is none more certain than that depletion must be much more moderate than in ordinary frank, or inflammatory pneumonia. In the second place, the position of President Harrison was such that it would be hardly possible to discuss points of treatment, without exciting feelings which are least conducive to correct conclusions.

Under these circumstances we entirely approve of the course of Dr. Miller in abstaining from replying to these anonymous comments.

We must confess that we regret, extremely, the publication of the editorial comments. Knowing, as we do, that the general course of the editor of the Boston Journal is not fitted to wound the feelings of his brethren, or to countenance in any way an unfounded aspersion, we need not express our surprise at the following most uncalled for remarks.

*Report of the Treatment of the late President Harrison.*—A communication appears in the Journal to-day, that will be regarded with attention, it is apprehended, by practitioners generally. The circumstance of receiving the manuscript brings to mind an inquiry made some time since by an intelligent gentleman, whether the attending physician's account of the manner of treating the disease of which General Harrison died, was drawn up by himself? Now it cannot very well be concealed, since rumour has taken control of the story, that very many conceive that the scientific supervision of a medical gentleman in Philadelphia was thought quite necessary to give completeness to a report, which had been roughed out at Washington, but was thus finished according to modern requirements of literature and science. Some people, it is well known, are not satisfied with relating a discreditable fact, without giving it some important additions

which might not be improbable; hence the suggestion that the prescriptions in the medical report were constructed cautiously, under the vigilant supervision of a scholar, some time after the death of the illustrious patient. If we could ascertain the truth of the matter, it would be exceedingly gratifying. Not knowing, with certainty, whether envy or ignorance is at the bottom of these reports, a hope is entertained that those who can, will clear up the mist that now envelopes a matter in which the whole profession feels an interest.

As to the first charge or insinuation, we would state that the report was sent by Dr. Miller directly to us, and was not even altered to the degree which is perfectly justifiable without interfering with the tenure of the article. It was not touched, except some insignificant verbal changes, which every proof-reader feels himself bound to make. The report carries with it internal evidence of not being got up; it was evidently not originally intended for publication, but was merely printed after its publication had been asked for. As to the implied statement that the prescriptions were altered by the author, his character and that of the consulting physicians is more than sufficient to shield them from insinuations of so contemptible a nature.

We have felt ourselves bound to notice this subject, partly because the report in question originally appeared in the columns of the Examiner, and partly from warm personal regard for men whose whole professional career has been pure and honourable, and who are now assailed with unfair censure and, still worse, with indirect insinuations of the most offensive character. But we have another, and we trust a higher reason; it is one which is deeply connected with the ethics of medicine. The publication of a case which terminated fatally and excited so much sympathy, requires no little moral courage on the part of the physician, and we conceive that it merits the respect of his professional brethren, and not ill-timed and ungenerous criticisms, or, what is far worse, doubts as to his professional honour.

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## FOREIGN.

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*A Case of Lusctas Spastica, with observations.* By AUG. FRANZ, M. D. Leipsic, M. R. C. S., &c.—Mrs. W., aged 42, of robust and plethoric habit, has, during several years, been subject to rheumatism. In the beginning of Ja-



uary last she suffered from severe cold in the head, with toothache, and acute lancinating pain over the left half of the face, attended with some degree of fever. With a little care, and the use of some domestic medicines, the cold abated, and the febrile symptoms subsided; the face-ache, however, although to a certain extent diminished, was confined to the left orbit, and assumed a remittent character. It appeared principally towards evening, lasted during a part of the night, and became more intense during bad weather. At each of the pains a slight inversion of the left eye was observed, which became in time more decided and more constant. The eye was now no longer straight in the morning and during the absence of the paroxysms, as was the case at the commencement of the complaint, but remained permanently inverted. With this inversion the necessary concomitant of double vision now made its appearance; although slight in the beginning, it increased in the same ratio as the inversion, and was at last so annoying that the patient was obliged to blind one eye or the other, in order to follow her pursuits of reading, needlework, &c. When the right eye was closed, the left or squinting eye assumed always its proper position in the orbit; one morning, however, after the patient had been out to a late hour the night before, she found, on binding up the right eye, that she could no longer direct the left eye towards a book she wished to read, but the cornea was completely fixed in the inner canthus. The print appeared to her very distinct, and the inner eyelids, more especially the upper, felt stiff, and its movements were limited. The patient being much alarmed by this circumstance, called upon me a few days afterwards for advice.

On the 8th of March, when I for the first time saw her, nothing abnormal could be distinguished in the right eyeball, neither in its position nor movements; the iris even responded properly to different degrees of light. The left eye, on the contrary, was permanently fixed in an inverted position, so that one quarter of the cornea, which was not only inverted inwards, but also a little upwards, was hidden by the inner canthus and the upper lid. When the right eye was closed the left could not be brought into a proper position, but remained immoveably inverted. The pupil, although somewhat shaded by the inner canthus, was diminished in size, and did not answer to different degrees of light, nor contract even when a strong light was concentrated into it by means of a lens. On opening the eyes, the aperture between the lids was of the same extent in both eyes; but the upper lid of the left eye could only with difficulty be moved downwards, and then did not entirely cover the globe: it could, however, be brought in contact with the lower lid when drawn down with the fingers. In the inner canthus the conjunctiva was a little

reddened, and the sclerotica presented a fine vascularity; the eyeball felt compressed, and as if pushed forwards, and in the orbit was perceptible a sensation of fulness and tension, with an occasional pricking and lancinating pain. There was no intolerance of light. On closing the right eye, remote objects could not be distinguished, and those near her were seen very indistinctly and faintly. When both eyes were open, the double vision was well marked.

From the history of the case, and the appearance of the affected eye, I was induced to believe that the complaint was a spasmodic affection of some of the muscles of the eye and upper lid, dependent on a rheumatic or hysteric cause, and consequently ordered the following treatment to be pursued:—Eight leeches to the temple; linseed poultice, with Herb. Hyoscyami, to the eye; a warm bath on two succeeding days; after which perspiration was promoted by means of Pulv. Ipecac. comp.; the bowels were kept gently open. On the third day the affected eye could already be moved from the inner canthus towards the centre of the orbit, when the other was closed, but returned to its inverted position on the cessation of the effort of the will. Emplast. Cantharidis was then applied behind the left ear; the eye was fomented with Infus. Anthemides et Hyoscyami; Ung. Hydr. with a little Extr. Belladonnæ rubbed into the lids; irritating foot-baths at bedtime, and Tinct. Colchici, which acted freely on the bowels, were ordered, and the left eye principally to be used. By these means the inversion and other symptoms were gradually lessened, and disappeared entirely a fortnight after the commencement of this treatment; so that at this time the eyeball had its proper position in the orbit, enjoyed freedom of motion in all directions, could be completely covered by the upper lid, and the pupil was of its proper dimensions, expanding and contracting regularly: in fact, no difference existed between both the eyes. As the sclerotica was yet somewhat vascular, and a slight sensation of tension was felt in the orbit on moving the eye, the use of Tinct. Colch. and the ointment was continued for a few days, and the patient advised never to wash the face with cold water. Under this treatment the affection soon vanished, and the eye has ever since been perfect in its position, movements, and function of vision, as the iris also in its actions.

The accomplishment of a cure under this mode of treatment in so short a space of time, proves that the permanent inversion or *lucitas* in this case was not the effect of a disease of the brain, nor of paralysis, or any other affection of the musculus rectus externus, nor of any adventitious growth in the orbit, but was of a spasmodic nature, at first remitting but subsequently permanent, of which rheumatism was the proximate cause. The spasmodic affection extended to the rectus internus, proba-



bly to the rectus superior and inferior, and also to the obliquus inferior, and levator palpebræ superioris, as is evident from the direction of the cornea inwards and a little upwards, and from the limited motion of the upper lid downwards. The affected muscles being only those supplied by the third pair of nerves or motores oculorum, it can hardly be doubted that the rheumatism, which at first affected the left half of the face, was in time restricted to the sheaths of the left oculo motorius exclusively. It seems moreover probable, that not only the muscular branches of this nerve were affected by rheumatism, but also the short thick branch given off to the ciliary ganglion, and that thus was occasioned the permanent spasmodic contraction of the pupillary margin of the iris, and consequently the diminished size of the pupil.

In eyes affected with inversion I have sometimes noticed the pupil to be contracted, but at other times, and indeed far more frequently, dilated. The interesting question now presents itself—how far this difference in the state of the pupil may be considered as a diagnostic sign, as regards the primary cause of the inversion? From the above case, and from some other observations I have made in this respect, it appears to me that a contracted pupil in an inverted eye would indicate that the original cause of the inversion was a spasmodic state of one or more of the muscles; for if this state continues some time, it will make the temporary contraction of the pupil and muscles of the permanent eye. Professor Müller,\* on the other hand, says, "There is a certain degree of paralysis of the muscles with contraction, or also a contraction with atrophy." In club-foot, the gastrocnemius sometimes presents either the one or other of these conditions. Now, if the inversion of an eye has been caused by such conditions of the muscle, I think we may fairly expect the state of the pupil to be that of dilatation. The pupil may, however, be dilated by being much shaded by the inner canthus, when the eye is inverted to a great extent, without any reference to the existing muscular defect.—*Lond. Med. Gaz.*

*Glanders in the Human Subject.*—DR. HUTTON said that as four or five cases of glanders in the human subject had, within a comparatively short period, come under his own notice, or that of the surgeons of the House of Industry, he was anxious to lay them briefly before the Society, and also to exhibit a specimen of the disease as it had manifested itself in the lungs of a patient who died about two days before. Previous, however, to entering on this case he would read the details of another, in which some experiments were made with the view of testing the character of the poison, and ascertaining whether it was glanders or not. One of the results of these was, that an ass,

inoculated with matter taken from the patient, was in due course attacked with the disease. The case was recorded by Mr. Rutherford, one of the resident pupils of the Hospital, for whose accuracy Dr. Hutton could vouch. The subject, a young man named P. Kelly, aged about twenty, was admitted into the Richmond Hospital on the 26th of August, 1838. On admission, his face presented that peculiar aspect which is so characteristic of glanders; the left half was very much swollen, tense and shining, the redness fading away gradually and becoming lost in the surrounding integuments. Both eyes, but particularly the left, were closed, from inflammation and œdema of the lids. The left ear was swollen, of a dark red or livid colour, and the patient was quite deaf on that side. The glands of the left side of the jaw and face were enlarged and indurated, and he complained of a feeling of numbness in the whole of that side of the head and face. About an inch and a half in front of the ear there was a large flaccid vesicle; there were also two pustules on the face, one of which had burst and was sloughing. On various parts of the body there were numerous pustules in different states, from the first to the more advanced stages. In the first stage, the skin in the situation where the vesicle afterwards occurred was of a peculiar pale, whitish appearance; in the next stage the vesicle appeared, not, however, exactly in the centre of the pale spot, but rather to one side. In a more advanced stage it became seropurulent, then pustular, and some time afterwards the pustules began to shrink and become depressed, in the centre. The mucous membrane of the mouth was inflamed and covered with a viscid adhesive mucus; the schneiderian membrane was also inflamed, but there was no discharge of purulent matter from it. The patient had the ordinary symptoms of irritative fever; his head was confused, but he had no pain or raving; his bowels rather free; his urine high colored. He stated that he had been always healthy, and when questioned as to the nature of his occupation, said that he had been employed for the last four months in attending horses which were laboring under glanders; that he had been retained specially for that purpose, and groomed the animals once a day. He did not recollect that he had a wound or a sore on either hand; he had not drank out of any vessel used by the horses, nor had he slept in the stable. He attributed his illness to fatigue after a long journey, and said that the first symptoms he had noticed were pain in his knees, followed by headache. Four days afterwards the left side of his face and head began to swell, with increase of fever and depression of strength. On the 27th, the day after admission, his symptoms were progressing; the tumefaction of the head and face increased, and several livid vesicles made their appearance, accompanied by severe pain in both jaws. Several ve-

\*Physiology, vol. ii. p. 82, German edition.



sicles now began to show themselves on the anterior part of the arms and chest; his pulse became smaller, and rose to 120; his respiration was somewhat suspicious; his breath foetid; and he felt pain when the ends of the long bones were pressed on in the vicinity of the joints. His head was still confused, but he had no raving. Towards eight o'clock in the afternoon there was a further exacerbation of his symptoms. He made water tolerably well, but did not seem to be aware of passing it. He was ordered to take ten grains of sulphate of quinine three times a day. On the 28th the eruption was still extending; his pulse 140, and weak; his thirst excessive, and he raved frequently. At half-past 3, P.M., he was restless and tossing about in bed, with constant involuntary motions of the lower extremities, quick small pulse, and hurried respiration. Twelve new spots had now made their appearance; his fever and delirium were increased, and he was passing both urine and feces involuntarily. There was a discharge of sanious fluid from the left ear, but none from the nostril. On the 29th a further exacerbation of symptoms took place. The left elbow joint was swollen and painful; the pustules increased in number and size, and were intermixed with gangrenous bullæ; and along the internal and anterior parts of the thighs, in the situation of the absorbents, pale, rose-coloured swellings began to appear. His breath was foetid, and the odour from his whole body almost insupportable. He had no discharge from the nostrils, but, on examining the nose, Dr. Hutton observed a small ulcer on the left side of the septum narium. The man died during the course of the night.

On examination a great number of small circumscribed abscesses or purulent depots were found in the extremities; as many as thirty were found in the left arm. There were two or three of the same kind in the pectoralis major, and several of the same description in the recti of both thighs, all circumscribed and imbedded in the muscular tissue. In the left lung there was a small depot of pus, surrounded by a dark, livid border; another of the same kind was discovered in the right lung. On the posterior surface of the heart there were dark coloured spots, and the blood was remarkably fluid in all the vessels. There was a deposition of pus under the mucous membrane of the larynx, and also on the posterior surface of the epiglottis; the left half of the face was in a semi-gangrenous state.

Shortly before this, another case of the same kind had occurred in the female ward. An ass which had been procured for the purpose, was inoculated with purulent matter taken on the fourth day from the patient. No disease was produced. On the 27th of August, the day after Kelly's admission, the experiment was again repeated on another with matter taken from the vesicles and pustules on his body.

The lymph was inserted into the left nostril of the animal, the pus into the opposite one; it was also inserted into the ear. On the following evening the ass appeared unwell, and next day had enlargement of one of the glands of the jaw on the left side, with increased heat and tenderness, accompanied by feverish symptoms. The left ala nasi swelled, and the line of absorbents from this to the glands on the side of the jaw could be distinctly traced. Next day there was a profuse watery discharge from both nostrils, particularly the left; and on the following day, the fifth after inoculation, the discharge was purulent. Soon afterwards the animal was killed with *nux vomica*, it having been previously ascertained, by Mr. Ferguson, V. S., that the animal was really glandered.

On examination, a cluster of pustules, having a tubercular aspect, were found in the left nostril; in the right there were circular patches of ulceration. Similar ulcers were found in the interior of the stomach, and there was a cluster of pustules in the anterior lobe of one lung. There was no morbid appearance in the larynx or trachea. Dr. Hutton exhibited several drawings to show the condition of the various parts, particularly the nostrils, stomach, and lungs. The next case, to which he would merely allude, as it was about to be published by Dr. M'Donnell, who had charge of it, had occurred a short time ago at the Richmond Hospital. The patient was admitted for an accident of which he recovered, but before he left the hospital he was seized with an affection of the joints, followed by an eruption of pustules along the side of the nose, which were recognised as being connected with glanders. Mr. Smith procured some of the matter, and inoculated an ass, which in the course of four or five days became sick, and was subsequently attacked with glanders. The same phenomena as observed in the latter case of inoculation were present; the cartilages of the joints were also found to be ulcerated. Dr. Hutton exhibited some drawings to show the condition of the parts. He also exhibited a drawing of a case which had occurred some years back at the Richmond Hospital under the care of the late Dr. M'Dowell, before the disease was sufficiently known. The drawing had been made by Mr. Conelly, and Dr. Hutton observed that he had represented the features of the disease with great accuracy, and had depicted most faithfully the white areola which encircles the vesicles. Since that period the areola has been invariably found to be present in every case, and is regarded as one of the pathognomic features of the disease. It has been noticed independently by Dr. Hutton, Mr. Adams, and other observers, and forms one of the marks by which the disease is distinguished from phlebitis. Dr. Hutton said that he should next proceed to read the notes of a case which had recently come under his observation. The pa-



tient, J. Butler, a boy about five years of age, was admitted into the Richmond Hospital on the 13th of Dec., 1840. It was stated that he had been always a fine healthy child up to the period of his illness. He complained at first of sickness and pain in his bowels, and on the following day had pains in his knees. About three days afterwards the left side of the face and eyelid became swollen, and the usual symptoms of irritative fever set in, accompanied with thirst, restlessness, quick pulse, and scanty urine. On the 5th of December the fever was increased, and the other side of the face was involved in the swelling; on the 7th a number of pimples with white tops appeared on the inflamed surface. On the 13th, the date of his admission, his face was greatly swelled and inflamed, and presented a number of pustules mixed with several ash-coloured ulcers: he had also an eruption of pustules over his body. Some of these were flattened and somewhat vesicular, like chicken-pock, some were conical and pustular, some in a state of incrustation. Around some of them, particularly those which were in the earlier stage, the peculiar white areola was still visible. Several of the joints were swelled and painful, and there was evident effusion into the left elbow-joint. The child was extremely feverish and irritable, tossing about the bed, and raving: the smell from his body was extremely offensive. He continued in this way, with little change in his symptoms, until the 16th, when he expired. All that could be learned of his history was, that the father was a labourer, and kept a horse, which was said to be labouring under a discharge from his nostrils, the result of cold, but Dr. Hutton said he had not as yet examined the animal. On examination after death, there was an effusion of pus discovered in the left knee-joint. In the thorax there was a small collection of pus close to the edge of the left lung. The lung was of deep red colour, and presented several ecchymosed spots on its surface, and contained two small abscesses. The right lung presented a few flattened tubercles. These were pointed out to the attention of the meeting by Dr. Hutton.—*Dublin Journal of Medical Sciences.*

*Two cases of dislocation of the tendon of the long head of the Biceps Humeri, from its groove.* By JOHN SODEN, Jun., Esq.—The first case is that of a man of advanced years, who injured his right shoulder by falling upon his elbow; in six months afterwards he sustained a second accident, a compound fracture of the skull, of which he died; and an opportunity was thereby afforded for examining the nature of the first injury. The symptoms of the injury of the shoulder were always obscure, on account of an alteration in the relative positions of the bones of the joint, which did not apparently depend on a fracture, and could not be considered to amount to a partial dislocation, to which,

however, it appeared to be more closely allied than to any other known injury.

The joint was flattened at the posterior and outer parts, and the head of the humerus was unduly prominent in front, and closely drawn up in contact with the under surface of the acromion, grating against it on motion, and becoming locked with it by the upper edge of the greater tubercle striking against that of the acromion on abduction of the arm.

The underhand motions were not much interfered with, except that the patient had no power to raise any object from the ground, on account of the severe pain induced by exercise of the biceps muscle. On examining the joint the accident was found to be a dislocation of the tendon of the biceps from its groove, unaccompanied by any other injury. The joint exhibited extensive traces of general inflammation, and the capsule was thickened and contracted.

The author infers that the altered position of the bones was dependent on the displacement of the tendon, and he explains its influence in the following manner:

The head of the humerus being placed on an almost flat surface, and not inclosed in a bony cavity, is subject to the control of the capsular muscles, which invest it on three sides. These muscles may be said to arise from the upper three-fourths of the circumference of a circle, to the centre of which, represented by the head of the humerus, they converge.

To enable the bone to maintain its equilibrium, it is necessary that the capsular muscles should exactly counterbalance each other; and as there is no muscle from the ribs to the humerus to antagonize the upper capsular muscles, it is suggested that this office is performed by the singular course of the long tendon of the biceps, which, by passing over the head of the bone, when the muscle is put in action, tends to throw the head downwards and backwards; it follows, therefore, that the tendon being removed, the head of the bone would rise upwards and forwards.

Allusion is then made to the frequency with which injury of the tendon is involved, in accidents to the shoulder-joint. A paper by Mr. Gregory Smith, in the 14th vol. of the Medical Gazette, on the "Pathological Appearances in seven cases of injury of the shoulder," is quoted to show, that in all those instances which were accidentally met with in the dissecting room, and are consequently without histories attached, the tendon was either ruptured or displaced; and the same altered position of the bones, as in the present case, was noticed in some of them.

The subject of partial dislocation of the humerus is next considered with reference to the probability of an injury of this tendon being involved in the production of that accident. Only three dissections of partial dislocations are on record; they are to be found in a paper, by Mr. Hargrave, in the Edinburgh Medical and Sur-



gical Journal. One fell under the observation of Mr. Hargrave himself, and the others he quotes from Sir Astley Cooper's large work, and from Dupuytren's *Lecons Orales*. In Mr. Hargrave's case, the tendon was ruptured; in Sir Astley Cooper's it had been, but had subsequently become reunited; and in Dupuytren's its condition is not mentioned.

The second case is one of a man, who, among other injuries, sustained a dislocation forwards of the humerus. Great difficulty was experienced in the reduction; and after death, for the man only lived for a few days, the joint was examined: it was found that the tendon was dislocated, and that it had passed completely over the head of the bone on its inner side, and was lying at the back of the joint. The author attributes the difficulty of reduction to this complication, with the displacement of the bone.

*On absorption and regeneration of the neck of the thigh-bone after fracture within the capsular ligament.* By W. W. BEEVER, Esq., of Manchester.—The patient, a woman aged seventy-three, lived nearly four years after the accident. On examination, no vestige of the neck remained, except a triangular portion of the under surface, three-fourths of an inch in length, which, from the obliquity of the fracture, had not been detached from the head. This was articulated by a distinct capsule to a second fragment jutting out from the shaft, and firmly united to it immediately anterior to the lesser trochanter. This adventitious joint, and a band of ligamentous structure extending from the posterior edge of the head to the capsular ligament, formed the only connection between the head and body of the femur. From the large quantity of callus thrown out by the trochanter and head of the bone, the author infers the possibility of bony union being effected.

*An account of two cases of Aneurism of the Trunk of the Superior Mesenteric Artery, in one of which Jaundice was induced by Pressure of the Sac.* By JAMES ARTHUR WILSON, M. D. Physician to St. George's Hospital.—The symptoms, which had most attracted attention during life in the first of these cases, had been very severe pain between the shoulders along the track of the sixth or eighth lower dorsal vertebræ. The patient died, after illness of about six months, in a state of great exhaustion, much aggravated by mercurial salivation.

On examination of the body a large globular tumor was seen extending from behind the head of the pancreas upwards, forwards, and outwards to the right side. The ductus communis was in close contact with this sac, but was, however, pervious to a probe. The poribiliarii of the liver were universally much enlarged.

The heart was small: the membrane lining

its cavities uniformly yellow. Tubercle of a consistence like mortar, and of a yellow colour, were observed in the lungs. In the head the dura mater was universally yellow; but both tunica arachnoidea and pia mater were free from that colour. The substance of the brain was also normal in colour; but a thin yellow fluid could be pressed from the divided surfaces of many of the vessels. The synovial fluid contained in cavities of joints was yellow: their cartilages were of the normal colour. The stomach contained thick yellow mucus.

The author observes that this case may lead us, under similar circumstances, to apply the ear to the upper part of the abdomen as a means of inquiry; it may also prevent our being taken by surprise in the event of sudden death: he also remarks on the inefficiency of the mercurial treatment adopted. In the other case noticed by Dr. Wilson there was a tumor pulsating in the epigastric region, about the size of a small orange, which, when the patient lay flat, projected to the left of the scrobiculus cordis. When the patient turned to the left side, the tumor ceased to be perceptible. On his turning to the right it might again be observed. Between Feb. the 11th, when he was admitted, and July the 12th, when he died, he was attacked with frequent hæmoptysis; and towards the last symptoms of phthisis presented themselves. In the course of this illness there was severe and increasing pain down the dorsal vertebræ, and cramps in the legs; and the tumor became more and more tender to the touch.

The aneurism in this case was in the trunk of the superior mesenteric; it was large, and kidney-shaped, raising up with it the pancreas, which lay at the upper extremity of the tumor.

The author notices, as distinguishing points in these two cases of aneurism of the superior mesenteric artery, that jaundice was, during life, a symptom of the one,—hæmoptysis of the other. In the latter case, the lungs, he observes, were extensively diseased by tubercles of the common kind.—*Trans. Royal Med. and Chirur. Society, in London Med. Gaz.*

*Rupture of the Bladder from Retention of Urine.*—J. D., aged 70, was admitted on May 17th, under the care of Mr. Liston. He came into the hospital at ten A. M., on account of a slight transverse wound of the throat, which he had made with the intention of destroying himself. He assigned as a reason for this proceeding, that he had not passed any water since the 14th, although several attempts had been made to pass the catheter by a surgeon. On examination, Mr. Taylor, the house-surgeon, found the bladder greatly distended, and reaching nearly to the navel, with extreme pain on pressure; but the pain was restricted, or nearly so, to the hypogastrium. On farther



inquiry it appeared that he had had stricture for several years, but had never before experienced a complete stoppage. Mr. Taylor immediately passed a No. 5 catheter, and met with a stricture three or four inches from the orifice; from eight to nine ounces of turbid urine followed. The pain and tenderness, however, continued without any relief, and at four P. M., it was first remarked that there was increased fullness of the hypogastrium, with tension and acute pain on pressure extending to the general surface and sides of the abdomen. Eighteen leeches were ordered to the hypogastrium, to be followed by hot fomentations; and as the bowels had been confined, ten grains of calomel, followed by half an ounce of castor oil, were administered.

7 P. M. The swelling and tension not at all relieved; tenderness somewhat increased; pulse full, 110; great thirst. He was bled to twenty ounces, and a fresh supply of leeches were ordered to the abdomen: five grains of calomel and five grains of Dover's powder every four hours.

May 18. Passed a restless night; has vomited some bilious matter this morning; pain and tenderness much aggravated, and patient's appearance greatly altered; is affected with clammy sweats; his respiration is hurried, and there is loud sonorous rattle over the whole chest. Bowels were freely opened during the night.

9, P. M. As little urine had been observed to pass since the introduction of the catheter, that instrument was again introduced. Not a drop of urine followed.

19. Patient is rapidly sinking, is quite unconscious. Died at five, P. M.

#### *After-death Appearances.*

The examination was made twenty-four hours after death.

*Abdomen.*—The parietal portion of peritoneum anteriorly in a state of intense inflammation, being nearly of a black hue; this appearance extended above the umbilicus. Considerable effusion of dark and turgid serum into the cavity, having no ammoniacal smell. Intestines, omentum, and mesentery, also much injured. On displaying the bladder, which was contracted, its serous covering was found intensely inflamed and adherent posteriorly to the rectum. On removing the serous tunic, the cellular tissue around and beneath was found to be infiltrated with a bloody serum, having a strongly urinous odour; the cellular membrane broke down readily under the fingers.

The infiltration has extended throughout the pelvis, reaching nearly to the kidneys. The whole of the urinary organs were now removed, together with the symphysis pubis.

As rupture of the bladder was evident, air was forced into it by the ureter, and found to escape at the back part where the serous coat

was bulged out into a pouch. On laying it open, about two ounces of thick urine, and a small calculus, about the size of a peppercorn escaped. The mucous membrane was pale, but much sacculated, forming several small cysts between the fasciculated muscular coat. Posteriorly there was a round sloughy patch of the size of a shilling, communicating by a small aperture with the external cellular membrane, which was also in a sloughy state. The neck of the bladder presented a fringe of warty caruncles over the uvula. There was slight enlargement of the middle lobe of the prostate. On laying open the urethra, at the situation of the stricture, there was found to be a warty thickening of the mucous membrane about an inch in extent. The kidneys were pale and flabby, with a slight appearance of granular degeneration.

*Thorax.*—The lungs were congested posteriorly, with signs of intense bronchitis.

*Heart* enlarged and flaccid, with ossific deposit at the base of the mitral and aortic valves.

*London Lancet.*

*Specimen of the effect of a Ligature upon the Femoral Artery.*—Professor Harrison said he had lately had an opportunity of examining the artery of a man who had been operated on for popliteal aneurism about eight or nine years ago in the Richmond Hospital. The case had been under the care of the late Dr. M'Dowell, who took up the artery in the upper third of the thigh, and the man was discharged, cured, in the course of a few weeks. He continued to enjoy good health until a short time since, when he was attacked with bronchitis, for which he was taken into Sir Patrick Dun's Hospital. At the time of his admission he was in a state of great exhaustion, and survived only a few days. On dissection, the lungs were found to be emphysematous, and exhibited the anatomical characters of bronchitis. There was nothing remarkable in the heart, except some hypertrophy of the right ventricle, but the aorta showed numerous traces of organic alteration. It retained its cylindrical form, without any tendency to collapse of its walls, and at some points the sides of the vessel could not be approximated without considerable force. Its interior was found to be thickly studded with calcareous scales, covered in most places by the lining membrane, but in some the lining membrane was deficient over the calcareous deposit. At the place where the ligature had been applied upon the femoral artery, there was obliteration of the canal of the vessel to the extent of an inch and a half. Half an inch above this obliterated portion, the profunda artery arose, and appeared to be considerably dilated. Below it the femoral artery was pervious down to the ham, where it again became obliterated to the extent of about two inches. The articular arteries were enlarg-



ed.—*Dublin Journal of Medical Science*, July, 1841.

*Two Cases of Goitre cured by Ligature.* By M. J. BACH, of Strasbourg.—Henri Klein, aged 30, first perceived an enlargement in the front of the neck, about ten years ago, which gradually but slowly enlarged, until it attained such dimensions as to become very troublesome from its pressure on the larynx and trachea. The tumour was moveable, though adherent by a pretty broad base. It felt at certain points hard, almost cartilaginous or osseous, whilst in others it was soft and presented fluctuation. It extended upwards to within two finger-breadths of the ramus of the lower jaw, and downwards to about the same distance from the clavicle, displacing outwards the sterno-mastoid muscle and carotid artery on the right, and pushing the larynx inwards and towards the left.

M. Bach having resolved to free him of this tumour by operation on the 25th of July, made a crucial incision over the centre of the tumour, and, after dissecting back the flaps of skin thus formed with his fingers, broke down all the cellular attachments of the tumour, and turned it out, leaving it still, however, attached by its vascular base. Around this a strong ligature was placed and moderately tightened, the ends of the ligature being passed through a silver tube, in order to admit of the pressure being increased as required. Lint dipped in cold water was then laid over the tumour, and was directed to be frequently renewed. The patient was then put to bed.

The constriction was twice increased during the day as the ligature became looser, but was never drawn tight. At each time when the ligature was tightened, pain in breathing and swallowing was complained of, as well as a pain which extended towards the nape of the neck.

On the 26th, pretty intense reaction had come on, requiring blood-letting, and the tumour had become of a black colour. Puncturing it with a needle gave no pain. The ligature was twice tightened on this and the following days.

On the 31st, the tumour had become moveable, and emitted a strong gangrenous odour. It was therefore cut off before the ligature, leaving this still in its place, and tightening it still further.

By the 5th of August the pedicle had completely disappeared in consequence of the free suppuration which had been established, the flaps of skin were therefore brought in contact over the wound by means of adhesive plaster, and by the end of the month he was discharged cured.

In the other case the man was 27 years of age, and the tumour about the size of an orange. Instead of the crucial incision, a simple transverse incision was made, the tumour turned out in the same way, and the ligature passed around

its root, gradually and daily tightened. On the fourth day the tumour was cut off before the ligature; on the sixth day the ligature itself was removed; and by the thirtieth day after the operation he was discharged cured.

M. Bach considers that all goitres are not curable by operation. When the enlargement of the thyroid body depends on the presence of cysts in its substance, or when it is simply enlarged, as in simple goitre, or even when it presents a scirrhus induration, provided in all these cases the adhesions are not too extensive, or the base too broad, M. Bach thinks they may with propriety be operated on. In that form which he denominates the aneurismal, and in that depending on development of the parenchymatous structure, he recommends that no operation be attempted, the first being beyond the reach of art, the other yielding to medical treatment. He recommends the ligature in preference to the knife in every case, and urges the necessity of making the pressure very moderate, for the first three days at least. In this way, he says, acute pain is avoided, and the patient is not exposed to violent fits of suffocation, nor to hæmorrhage from the ligature cutting through the morbid vessels, nor to phlebitis, symptoms which are but too apt to come on if this be not attended to.—*Ed. Med. and Surg. Journal, from Gaz. Med. de Paris*, 2d January, 1841.

*On the utility of Oxalic Acid in Inflammations of the Mucous Membranes.* By M. NARDO.—At the scientific meeting at Turin in September last, M. Nardo made known the results of his experiments on the therapeutic effects of oxalic acid; to which subject he had been devoting his attention for the last twelve years. From his experiments he concluded that this acid possesses antiphlogistic properties superior to that of any other vegetable acid, as the malic, the citric, the acetic, or the tartaric, and that, in addition, it possesses the precious property of calming the violent pain which attends inflammation of the mucous membranes. He especially recommends its employment in all diseases where this membrane is implicated, as in angina, gastritis, gastro-enteritis, stomatitis, and aphtha. He says that the use of oxalic acid renders the loss of blood much less necessary. The dose he employed was one and a half grains in about eight ounces of fluid. It is not mentioned how often it ought to be repeated. He regards it as a contra-stimulant.—*Ibid., from Repertorio delle Scienze Fisico-Mediche del Piemonte*. January, 1841.

*Further facts regarding the identity of Small-Pox and Cow-Pox.* By Dr. BASILE THIELE, of Kasan in Russia.—In the spring of 1836, Dr. Thiele inoculated the matter of small-pox on the udder of some cows; pustules were produced which bore all the characters of the true vaccine vesicle in those animals. The matter



from these vesicles were applied by punctures to the arms of several children, and produced the true vaccine disease; only that the local symptoms were more intense, and the consecutive fever more severe. The vaccine lymph thus procured was carefully observed during seventy-five successive transmissions in the human subject, and appeared always to retain its normal character.

During the spring of 1838, M. Thiele repeated his former experiments with the same success. The cows chosen were from 4 to 6 years old, and they were inoculated with the small-pox matter on the posterior part of the udder. Whether the matter used was taken from mild or severe, from the single or the confluent form of small-pox, the vesicle produced on the udder of the cow was always of the same mild character, and the lymph obtained from it proved equally mild when applied to the human system. In general only a third of the inoculations succeeded. On the third day, slight induration of the cellular tissue at the seat of the puncture was observed. On the fifth a pustule formed; from the seventh to the ninth it had the appearance of a vaccine vesicle, from the ninth to the eleventh it began to desiccate and form a crust, which fell off a few days after, leaving a deep cicatrix; from the fourth to the seventh day the circulation of the animal was slightly accelerated, and its temperature increased, but its general health appeared to remain unaltered.

Dr. Thiele satisfied himself, from experiment, that the virus thus obtained from the cow ought to be allowed to remain dry on glass for five or six days before being used, and then mixed with a little fresh warm milk before being applied to the arm of the infant. The vesicles resulting from the vaccination of this lymph appeared in every respect similar to those of the ordinary vaccine vesicles. During the first transmissions through the human subject, Dr. Thiele observed two separate febrile attacks; one from the third to the fourth day, and the other from the eleventh to the fourteenth day; in this respect still bearing some analogy to small-pox. He says that this double febrile accession is not got the better of till about the sixth transmission, and that it is not till then that it is safe to give up mixing the lymph with warm milk previous to vaccination. To the neglect of this precaution he attributes the occurrence of some cases of true small-pox eruption after vaccination, with this lymph during its earlier transmissions; but he immediately afterwards mentions a circumstance which appears to invalidate the statement as to its being true small-pox eruption; for he states some of this matter, taken and mixed with milk, communicated the vaccine disease to other children, and remained as vaccine lymph in all its subsequent transmissions. — *Ibid.*, from *Bulletin de l'Académie Royale de Médecine*, January 1841.

*The Art rather than the Science of Surgery.*—We find from a late number of "L'Expérience," that in the short time since the first performance of the operation for squinting, no less than 49 different instruments for its performance have been invented in France and Germany, and are to be found at M. Charrier's. We fear that a considerable addition to their number, if not to their utility, might be made from our own country. The chief inventors are MM. Dieffenbach, Phillips, Jules Guérin, Velpeau, Leroy d'Etiolles, and Lucien Boyer. — *Lond. Med. Gaz.*

### HEALTH OF THE CITY

INTERMENTS in the City and Liberties of Philadelphia, from the 11th to the 18th of September.

Diseases.	Adults.	Children.	Diseases.	Adults.	Children.
Bowel Complaint,	0	11	Brought forward,	29	51
Cancer,	1	0	Neglect,	1	0
— Mouth,	0	1	Old age,	4	0
Casualty,	0	1	Palsy,	1	0
Cholera Morbus,	0	1	Pneumothorax,	1	0
Consumption of			Rupture of Uterus,	1	0
the lungs,	10	1	Small pox,	0	9
Convulsions,	0	6	Still-born,	0	7
Diarrhœa,	0	3	Teething,	0	1
Dropsy,	1	0	Tabes Mesente-		
— abdominal,	1	0	rica,	0	1
— of the			Tetanus,	0	1
head,	0	4	Ulcerated Sore		
— Breast,	3	0	Throat,	0	1
Disease of the			Unknown,	1	1
Heart,	1	0	Varioloid,	0	1
— Bowels,	0	1			
Drowned,	1	0	Total,	111	38 73
Dysentery,	0	1			
Debility	1	2	Of the above, there		
Fever, Remittent,	1	0	were under 1 year,	37	
— Nervous,	1	0	From 1 to 2	19	
— Typhoid,	0	1	2 to 5	11	
— Scarlet,	0	2	5 to 10	1	
Hernia,	1	0	10 to 15	4	
Inflammation of			15 to 20	1	
the Brain,	1	3	20 to 30	13	
— Bronchi,	1	0	30 to 40	9	
— Lungs,	1	2	40 to 50	4	
— Bowels,	0	2	50 to 60	3	
Marasmus,	2	7	60 to 70	2	
Malformation,	0	1	70 to 80	2	
Measles,	0	1	80 to 90	3	
Mania a Potu,	2	0	90 to 100	2	
			Carried forward,	29	51
			Total,		111

Of the above there were 6 from the almshouse, and 6 people of colour, which are included in the total amount.